transmission coil (21), non-selective RF pulses (7) and, via the gradient coils, two or more gradient pulses (8, 10, 11) with respective linearly independent spatial directions, the magnetic resonance signals detected by the microcoil (6) being received via the receiving unit (27), in order to calculate therefrom, by means of the reconstruction unit (25), the position of the interventional instrument (1) that can be displayed by means of the visualization unit (26).

REMARKS

The foregoing amendments to the claims were made solely to avoid filing the claims in the multiple dependent form so as to avoid the additional filing fee.

The claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

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APPENDIX

3. (amended) A method of imaging blood vessels (angiography) where a catheter (1) which is provided with at least one microcoil (6) for the detection of magnetic resonance signals is inserted into the blood vessel (3) of a patient to be examined, characterized in that the position of the catheter (1) is detected by means of the method claimed in ~~claims 1 or 2~~ claim 1 and the intensity of the detected magnetic resonance signal is reproduced as a function of the catheter position.

9. (amended) A diagnostic magnetic resonance imaging method for imaging the surroundings of an interventional instrument (1) on which a microcoil is provided for the detection of the magnetic resonance signals, characterized in that a localization method, particularly as claimed in ~~any one of claims 1 or 2~~claim 1, is applied alternately with a sequence of RF pulses and gradient pulses that is intended for the imaging, the parameters of the imaging sequence that determine the volume to be imaged (field of view or FOV) being predetermined by the position of the interventional instrument (1) determined by means of the localization method, so that an image is formed of the surroundings of the interventional instrument.

16. (amended) A magnetic resonance system for carrying out the method claimed in ~~claims 1 or 2~~claim 1, which system includes at least one coil (17) for generating a uniform, steady magnetic field, a number of gradient coils (18, 19, 20) for generating gradient pulses in different spatial directions, an RF transmission coil (21) for generating RF pulses, at least one control unit (24) for controlling the temporal succession of RF pulses and gradient pulses, a reconstruction unit (25) and a visualization unit (26), and an interventional instrument (1) with at least one microcoil (6) which is connected to a receiving unit (27), characterized in that the control unit (23) is used to generate, via the RF transmission coil (21), non-selective RF pulses (7) and, via the gradient coils, two or more gradient pulses (8, 10, 11) with respective linearly independent spatial directions, the magnetic resonance signals detected by the microcoil (6) being received via the receiving unit (27), in order to calculate therefrom, by means of the reconstruction unit (25), the position of the interventional instrument (1) that can be displayed by means of the visualization unit (26).